

NATURE'S OWN EFFORTS TO CONSERVE WATER IN SOUTHLAND ARE HAMPERED BY BRUSH FIRES



Trees and shrubs on mountain watersheds play an important part in conserving water. While reforestation is difficult in Southern California, the Los Angeles County Forestry Department is planting a large number of trees each year. Above, left, successful instance of reforestation; right, a year-old Coulter pine transplanted from County nurseries; lower left, young tree ready for planting, and lower right, Federal Forestry Department clearing a fire break.

Brush Cover Aids in Water Supply Vegetation on Mountain Slopes Prevents Erosion and Loss of Rainfall

By GEORGE H. CECIL, Executive Secretary, Conservation Association of Los Angeles County

The trees and brush cover on our mountain slopes of Los Angeles County are fundamental to flood control. On these precipitous areas, trees and brush perform their maximum function in the control of the precipitation that falls upon them. This is particularly important since not only are our mountain slopes steep but our major storms are torrential in character, several inches often falling within a few hours.

Trees and brush perform many functions in the control of the run-off of this precipitation. First, the leaves and twigs break the force of the downward, permitting the precipitation to reach the soil as spray and falling drops. Then the litter of leaves and dead twigs which form a protective cover for the soil to a depth of several inches further prevent the falling water from carrying into the soil suspended particles which would seal the soil interstices, and cause rapid surface run-off with consequent soil erosion. The plant roots also tend to hold the soil in place and assist in the prevention of deep erosion.

Experiments carried on by the California Forest Experiment Station show that the material eroded and carried off by precipitation on barren soil unprotected by leaf litter is from one thousand to five thousand times greater than when the mat maintained by nature re-

mains intact. Further, the run-off of water from such areas is from three to twenty times as great as on areas protected by leaf litter.

A further function of forest cover is through the mechanical and chemical action of the root system, which breaks down the underlying rock formation and permits added percolation and also functions in the building up of the soil.

A heavy and continuous cover on our watersheds is, therefore, absolutely essential to the prevention of rapid run-off and erosion. Unfortunately, the cover on our watersheds has deteriorated tremendously in the last hundred years. In his diary of August 29, 1826, written at the San Gabriel Mission by J. J. J. Smith, California explorer and trapper, the Mission location is described as follows:

"The situation is very handsome, pretty streams of water running through from all quarters, some thousands of acres of rich and fertile lands as level as a die in view, and a part under cultivation; surrounded on the north by a high and lofty mountain handsomely timbered with pine and cedar, and on south with low mountains covered with grass."

In the last twenty-five years in particular has the destruction of watershed cover reached alarming proportions. It has been found that 51.47 per cent of the watersheds of the Los Angeles Basin have been run over by fire within this period, and of this amount almost two-thirds of the damage has

occurred in the last decade. In the six years, 1919 to 1924 inclusive, 85 per cent of the San Gabriel drainage was swept by flames, practically all in the years 1919 and 1924. It is fortunate for us that these years of terrific damage were followed by years of comparatively light precipitation. Even with rainfall below normal thousands of tons of debris have been washed into the canyons and in many instances found their way to the valleys, doing damage running into thousands of dollars.

In 1925, as a result of a conflagration in the San Gabriel which burned over 50,000 acres, the citizens of the County called upon the federal and local authorities responsible for the protection of these areas, for relief. Both agencies—and particularly the Los Angeles County Board of Supervisors—responded liberally. As a result, the annual expenditures for fire protection have tripled. Hundreds of miles of trails and roads have been constructed and over 600 miles of fire breaks have been built and are being maintained on the divides between the various watersheds to localize the damage from fire. These and many other improvements have been made with the result that today, thanks to the intelligent efforts of its officials, the watersheds of Los Angeles County receive protection second to none in the United States.

As a result of this added effort in the past seven years, beginning in 1925, a decrease in the number of forest fires per capita occurring in major watersheds of Los Angeles County is marked upon the economic history of the community.

Thus the results of the last seven years have proved beyond a doubt that additional equipment and facilities will go a long way toward the solution of protection for a fire

of our mountain watersheds and reduce the damage therefrom to a minimum.

Nor has the County Forestry Department, under the direction of the Board of Supervisors, overlooked the importance of reforestation. Some of the good friends of forest conservation feel that immediate steps should be taken to replace the brush cover on our mountains with tree growth, bringing back as nearly as possible the conditions that existed a hundred or more years ago. While slopes thus clothed would be more pleasing to the eye than is now the case, the covering of these watersheds provided by nature, following fires performed in the conservation of water and the prevention of erosion almost if not quite the same function that would be performed by a tree growth.

The fires which have run over and consumed the former forests of these slopes, together with subsequent erosion, have also seriously disturbed the soil conditions so essential to the restoration of tree growth. Reforestation under these conditions is a slow and expensive proposition and should be undertaken only after the most painstaking and careful preliminary work. Here again our County officials have realized the situation and the County Forester's office, with the approval of the Board of Supervisors, is carrying on carefully controlled experimental work in the replacement not only of tree cover but of methods that it is hoped will bring about a more rapid replacement of brush on areas denuded by fire. Until these experiments have been given time to demonstrate their effectiveness, it would be extremely unwise to try to even partially forest our mountain watersheds.

[This is the fourth of a series of six articles on flood protection in Los Angeles County. The fifth will appear in an early issue.]

Home-makers Bureau

By Julia Lee Wright CHOCOLATE SAUCE

At some time in our lives we have all longed for a good Chocolate Sauce recipe. We want one that will look and taste like those we get in the restaurants or soda fountains. The following recipe is particularly good for making Chocolate Sundae, or is delicious served over cake or even puddings. Also here is a hint worth remembering in connection with chocolate recipes, a drop or two of MINT extract will do wonders to

bring out that cool chocolate flavor heretofore known only to the commercial world.

- Chocolate Sauce
- 1/2 cup ground chocolate
- 1/2 cup white sugar
- 1/2 teaspoon vanilla
- 1 tablespoon cornstarch
- 1/2 teaspoon salt
- 1 1/2 cups water
- 1 tablespoon butter

Sift dry ingredients. Add water and bring to boiling point, stirring constantly. Cook about five minutes. Add butter, stir constantly. Cool slightly, add vanilla and serve hot or cold with pudding or ice cream. When to be served immediately, cook dry ingredients with water until thick enough to coat spoon. Add one egg yolk, cook one minute, cool and add butter and vanilla. The Homemakers' Bureau in-

vides you to write for any information you desire, be it a recipe, a budget, a party planned. Furthermore, if you would like to have our comprehensive leaflets on the subjects of Canning, Jelly-Making and Pickling, simply enclose a large, self-addressed, stamped envelope with your request to Julia Lee Wright, Safeway Homemakers' Bureau, Care of Safeway Stores, Inc., Box 774, Oakland, California.

PUSHES CART TO THE WEST COAST

WHEELING, W. Va.—(UP)—C. W. Darmon, this city's official push cart pusher, is en route to the coast pushing his push cart. The push cart pusher reported to friends here a slight accident to his cart at Slaterville, W. Va., when an autoist pushed the cart over a hill, damaging it considerably. Darmon had the cart repaired and pushed on, he wrote.

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Rich—Nourishing—Specially Good for Children.
Can **19c**

N. B. C. Fancy De Luxe Cookies
(Assortment)
Lb. **27c**

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Granulated Large Pkg.
27c

Holly Lye
Concentrated. Effective.
3 for **25c**

Kellogg's Pep Pkg. **11c**

Cut-Rite Paper
Wrap Sandwiches, Etc. Patented Package Perforator
Box **8c**

Vinegar
Pure apple cider vinegar.
Pts. **10c**
Qts. **15c**

Pet-M-M MILK
Rich milk for cooking and table use.
3 Large or 6 Small **19c**

Northward to Labrador



Here are Glen R. Kerchner, motion picture photographer, and Charles Rocheville, pilot, for the MacMillan Arctic expedition. Californians both, they flew the monoplane "Multicolor" this week from Rockland, Me., to Sidney, N. S., where they met Lieut. Commander Donald B. MacMillan's schooner, Bewdwin, and proceeded to Nain, Labrador. The expedition will base there for the rest of the summer and will engage in taking color pictures of wild animal and Eskimo life in Ballin Land and other previously unexplored Arctic regions.

INNER TUBES MAKE DOLLS
TOGUS, Me.—(UP)—Inmates of the National Soldiers' Home here keep themselves in pocket money by making dolls from discarded inner tubes.

BERRY PLANT GROWS IN TREE
CORNISH, Me.—(UP)—A strawberry plant grows out of the crook of an elm tree at Main and Cumberland streets, eight feet above the ground.

Dealing New Blow to Crime



Photo shows Governor Ralph signing bill to provide for the setting up of a 2000-mile teletypewriter network for the California division of criminal identification and investigation. Map at left shows the 17 cities included in the hookup. When the network is set up and working, two minutes after the commission of a crime a 100-word summary of the details in typewritten form is in the hands of 17 police departments in the hookup. The California network will be second largest in the United States and will represent a cost of \$173,000.

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